

REMARKS

In response to the Office Action dated July 13, 2007, Applicants respectfully request reconsideration based on the attached amendment and the following remarks. Applicants respectfully submit that the claims as presented here are in condition for allowance.

Claims 1-23 are pending in the present application. The Examiner has indicated that claims 4-8, 14-18 and 20 are allowable, although the Examiner also states that claims 6 and 16 are objected to for informalities. Applicants cordially thank the Examiner for indication of the allowable subject matter. Claims 3, 6 and 16 have been amended. No new matter has been added by the amendment. Applicants respectfully request reconsideration of claims 1-23 based on the amendment and the following remarks.

Claim Objections

Claims 3, 6 and 16 stand objected to for informalities. Regarding claim 3, line 6, the Examiner states that the limitation "a transforming part that transforming the first alternating current" should be amended to read "a transforming part that transforms the first alternating current". Regarding claims 6 and 16, the final limitation states "an adding section that sums the currents that flow in each of the lamps to provide the power supplying part". The Examiner notes that the adding section does not provide the power supplying part, but the adding section provides the power supplying part with a feedback signal made of the sum of the currents flowing in each lamp.

Claims 3, 6 and 16 have been amended as suggested by the Examiner.

Accordingly, it is respectfully requested that the objection to claims 3, 6 and 16 for informalities be withdrawn.

Claim Rejections Under 35 U.S.C. §102

Claims 1, 2, 9-12, 21 and 22 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Williams (U.S. Patent No. 6,127,785). The Examiner states that Williams discloses all of the elements of the abovementioned claims, primarily in FIGS. 3 and 4B, and column 1, lines 24-40, column 4, lines 22-33, column 6, lines 28-44, column 8, line 63 and column 9, lines 1-10 and lines 36-41.

Williams discloses a fluorescent lamp power supply and control circuit which enables the lamp to be regulated to shine at a substantially constant intensity as the lamp ages or the power supply voltage fluctuates, and which also enables lamp intensity to be adjusted continuously and smoothly over a chosen intensity range including, if desired, substantially from full OFF to full ON. (Col. 1, lines 17-22.) Note, Williams does not disclose lamp intensity to be adjusted from substantially from full ON to full OFF. Further, Williams discloses that the Feedback circuit of FIGS. 4A-4C is coupled in a fashion similar to that shown in FIG. 3 so as to sample lamp current I.sub.LAMP and provide current regulation. (Col. 8, lines 55-62.) Williams does not disclose shutting power to normal lamps when any of the lamps are abnormal.

In particular, Williams discloses that the feedback loop forces switching regulator 125 to modulate the output of inverter 120 to whatever value is required to maintain a constant current in lamp 15. The magnitude of that constant current can, however, be varied by variable resistor 147. Because the intensity of lamp 15 is directly related to the magnitude of the current through the lamp, variable resistor 147 thus allows the intensity of lamp 15 to be adjusted smoothly and continuously over a chosen range of intensities, including full OFF to full ON without "dead-spots" or "pop-on" at low lamp intensity. (Col. 7, lines 48-57.) With respect to FIG. 4B relied upon by the Examiner to disclose parallel lamps 15A and 15B, Williams discloses that terminals 17A and 17B of lamps 15A and 15B, respectively are coupled together. Feedback circuit 130 is coupled commonly to terminals 17A and 17B of lamps 15A and 15B, respectively, and thus samples the combined lamp current $I_{\text{sub.LAMPA}} + I_{\text{sub.LAMPB}}$ so as to provide current regulation. Col. 8, line 63- col. 9, line 3.) However, Williams does not teach or suggest opening the whole circuit when at least one of the lamps connected in parallel is abnormal, thus preventing an overcurrent from flowing to the remaining normal lamps connected in parallel.

More specifically, Williams does not teach or suggest the feedback detection part receiving current that flows via the lamps to provide the power supplying part with a feedback signal that prevents the power supplying part from providing normal lamps with power, when at least one of the lamps is abnormal, as recited in independent claim 1 and similarly recited in independent claims 17 and 22.

Accordingly, it is respectfully requested that the rejection to claims 1, 2, 9-12, 21 and 22 under § 102 be withdrawn and allow the same to issue.

Claim Rejections Under 35 U.S.C. §103

Claims 19 and 23 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Williams in view of the knowledge available to one of ordinary skill in the art at the time the invention was made. The Examiner states that Williams discloses all of the elements of the abovementioned claims except, *the feedback detection part is formed on a printed circuit board*. The Examiner has taken official notice that it is well known to form circuits on printed circuit boards and thus, these claims are obvious in view of Williams.

First, it is respectfully noted that claim 19 depends from independent claim 11 and claim 23 depends from independent claim 22, both of which independent claims are submitted as being allowable for defining over Williams as discussed above. Furthermore, it is respectfully submitted that *forming the feedback detection on a printed circuit board* does not cure the deficiencies noted above with respect to Williams.

Claims 3 and 13 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Williams in view of Lin (U.S. Patent No. 6,259,615). The Examiner states that Williams discloses all of the elements of the abovementioned claims except, *a first switching part that connects or opens a current path through which a direct current provided from an external device flows*, which the Examiner further states is disclosed primarily in FIG. 2 and column 2, lines 8-17 of Lin.

First, it is respectfully noted that claim 3 depends from independent claim 1 and claim 13 depends from independent claim 11, both of which independent claims are submitted as being allowable for defining over Williams as discussed above. Furthermore, it is respectfully submitted that use of *a first switching part that connects or opens a current path through which a direct current provided from an external device flows* allegedly disclosed in Lin, or any other disclosure of Lin, does not cure the deficiencies noted above with respect to Williams.

Accordingly, it is respectfully requested that the rejection to claims 3, 13, 19 and 23 under § 103(a) be withdrawn and allow the same to issue.

Conclusion

In view of the foregoing remarks distinguishing the prior art of record, Applicants submit that this application is in condition for allowance. Early notification to this effect is requested. The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same. If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: /James J. Merrick/
James J. Merrick
Registration No. 43,801
Confirmation No. 4082
Cantor Colburn LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Customer No. 23413

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